MOULTONBOROUGH HIGHWAY EXPLORES EXPANDED USE OF MAGIC SALT™

By Scott Kinmond & Wayne Richardson

So we all want good winter travel and low expenses!

As many New Hampshire towns struggle to keep their roadways clear and safe for motorist during the winter months, they also struggle with the ever escalating costs and the environmental impact of conventional salt and sand applications. Many New Hampshire towns are turning to a pre-treated salt application known as Magic Salt™. With Moultonborough facing the same concerns, we have taken on the experiment of using the Magic Salt™ product in hopes of reducing our straight salt consumption by 30% to 40%. This is coupled with an assessment of the best sand/salt mix on our many other paved town roads.

What is Magic Salt and what are its benefits:

Magic Salt™ starts out as regular rock salt. It is then treated with the liquid Magic Minus Zero™ at a rate of 8 gallons per ton of rock salt. This patented liquid is trademarked as Magic Minus Zero™ and dramatically transforms rock salt into a new de-icing material working at lower spread rates. More information is available at www.nhicemelt.com.

Magic Salt™ is a highly effective ice melting product which is non-corrosive, safe for concrete and brick and substantially more environmentally friendly. With a simple motorized pump and tank system, Magic Minus Zero™ is easily applied to bulk rock salt stockpiles transforming this corrosive, potentially destructive and inefficient material into Magic Salt™. Magic Salt™ is biodegradable.

Magic Salt™ is economically superior, because it works better and lasts longer than straight rock salt applications. Magic Salt™ can displace an equal amount of ice or snow, at lower application rates, than regular rock salt.

Rock salt applications are said to be reduced by 30%-50%. The cities of Keene, NH and Salem, NH have been using Magic Salt for the past couple of years and have seen a 50% reduction in rock salt application. (Keene Sentinel 12/3/04)

Magic Salt™ also works longer and at temperatures as low as -35 F degrees. Regular rock salt stops working at approximately 18 F degrees, which hampers de-icing, and causing for applications of sand/salt mix use.

The need for sand in most circumstances is virtually eliminated or substantially reduced. This reduction of sand applications lowers costs for sand/salt mixtures applied to paved roads. Lower sand applications means reduced spring clean up, such as road sweeping and catch basin cleaning, and disposal costs. Finally, environmental impacts are reduced by lower salt and lower sand applications. Both rock salt and sand aggregate impact the environmental concerns for rock salt contamination of ground water, and sand sediment contamination of ground water runoff.

What does this mean for Moultonborough?

The Town of Moultonborough has classically used 1200 to 1400 tons of salt on town roadways annually. Some of this salt is mixed with sand, and applied to lower volume paved roads and gravel roads. In the 2009 budget we have predicted a reduction of salt use and sand aggregate use. In our experiment we should reduce this to 950 tons of salt. This will be applied at the reduced rate of approximately 350 lbs per lane mile, versus rock salt application rate of 600-700 lbs per lane mile. The snow removal fleet will also attempt to limit its sand/salt application on paved road to areas of safety concern such as hills, curves and intersections. Magic Salt™ will be applied earlier at the beginning of the storm event and then at the end of the storm to clear the pavement.

Moultonborough also provides winter maintenance to private roads for the purposes of maintaining fire lanes. With just under 200 miles of private roads, 90% are gravel roadways, and the remaining 10% are paved roads. The Town is hopeful they can also make a reduction in the straight rock salt application to the paved private roads ultimately saving public funds here as well.

While our total overall budget remains about the same with the application of Magic Minus Zero™, we think we will improve the roadway conditions and reduce the damage to the environment and traveling vehicles.

We will keep you posted on our study progress. Stay tuned.